UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
SERRAO, RANODHI N

ART UNIT	PAPER NUMBER
2141	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
	10/728,042	SMITH ET AL.
Office Action Summary	Examiner	Art Unit	
	RANODHI N. SERRAO	2141	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _04 December 2003_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-34_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _04 December 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 2-5, 7-9, 14, 17, 18, 22, and 23 are objected to because of the following

informalities: The mentioned claims are missing a transitional word such as "wherein"

after phrase "the system of claim 1". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 32-33 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. The claims recite "a component" multiple times. It is

unclear whether these components are the same component or different.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.   Claim 33 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

3.   When nonfunctional descriptive material is recorded on some computer-readable

medium, in a computer or on an electromagnetic carrier signal, it is not statutory since

no requisite functionality is present to satisfy the practical application requirement.

4.   The claimed invention as a whole must be useful and accomplish a practical

application. That is, it must produce a "useful, concrete and tangible result." State

Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. The purpose of this requirement is

to limit patent protection to inventions that possess a certain level of "real world" value,

as opposed to subject matter that represents nothing more than an idea or concept, or

is simply a starting point for future investigation or research (Brenner v. Manson, 383

U.S. 519, 528-36, 148 USPQ 689, 693-96 (1966)); In re Fisher, 421 F.3d 1365, 76

USPQ2d 1225 (Fed. Cir. 2005); In re Ziegler, 992 F.2d 1197, 1200-03, 26 USPQ2d

1600, 1603-06 (Fed. Cir. 1993)).

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

7.   Claims 1-19 and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated

by Arora et al. (2004/0064568).

8.   As per claim 1, Arora et al. teaches a Web-based system that asynchronously processes synchronous requests (¶ 218), comprising: an interface component that receives a synchronous request (¶ 144-146) and a processing component that parses the synchronous request across a plurality of Web services for asynchronous processing (¶ 71 and ¶ 279), the processing component aggregates asynchronous results from the plurality of Web services and returns a synchronous result (¶ 74-79).

9.   As per claim 2, Arora et al. teaches a system, the processing component parses the synchronous request based on a load balancing technique that distributes portions of the synchronous request to one or more of the plurality of Web services so that request processing is spread across respective Web services based on Web service load (¶ 680).

10.   As per claim 3, Arora et al. teaches a system, the load balancing technique dynamically conveys portions of the request from a first Web service to a second Web service with a lesser load, during processing (¶ 93).

11.   As per claim 4, Arora et al. teaches a system, the parsed synchronous request is serially and/or concurrently processed by the plurality of Web services (¶ 144).

12.   As per claim 5, Arora et al. teaches a system, the synchronous request and result is conveyed across the interface component via at least one of the following protocols: TCP/IP; IPX/SPX; UDP/IP; HTTP; SOAP; and a proprietary protocol (¶ 152).

13.   As per claim 6, Arora et al. teaches a system further comprises a queue that is utilized to post the synchronous request for retrieval by one or more Web services that are subscribed to process requests (¶ 625).

14.   As per claim 7, Arora et al. teaches a system, the queue is utilized to store information indicative of at least one of a querying client, the synchronous request, the interface component, the processing component, the processing component queue, and a connection type (¶ 210).

15.   As per claim 8, Arora et al. teaches a system, the information is utilized to track the request as it is being processed by the Web services, correlate results from the plurality of Web services with the synchronized request, and/or return a synchronous result (¶ 66-69).

16.   As per claim 9, Arora et al. teaches a system, the plurality of Web services comprise respective queues that store information indicative of at least one of a synchronous request provider, the synchronous request, the interface component, the processing component, the process component queue, a connectivity type, the Web service, and the Web service queue (¶ 624).

17.   As per claim 10, Arora et al. teaches a system further comprises an API that facilitates conveyance of the received synchronous request to the processing component and conveyance of the synchronous result (¶ 168).

18.   As per claim 11, Arora et al. teaches a system further comprises an error-handling component that transmits a message indicating processing of the request has been halted due to a time period lapse (¶ 351).

19.   As per claim 12, Arora et al. teaches a system further comprises an error-handling component that facilitates re-distributing portions of the request from a Web

service that is unable to process the portion to another Web service where the portion is
processed (¶ 680).

20.   As per claim 13, Arora et al. teaches a system further comprises an intelligence
component that facilitates one or more of determining Web service load, parsing the
request, distributing the parsed request, correlating results, grouping results, and
returning synchronized result (¶ 84).

21.   As per claim 14, Arora et al. teaches a system, the intelligence component
employs at least one of a statistic, a probability, an inference and a classifier (¶ 93).

22.   As per claim 15, Arora et al. teaches a system that employs dynamic load
balancing to asynchronously process synchronous requests (¶ 93), comprising: a
processing engine that posts synchronous requests in a message box that is accessed
by one or more subscribed Web-based services that asynchronously process the
synchronous requests (¶ 210-214); an aggregating component that correlates
asynchronous results with the synchronous request and groups the correlated results (¶
74-79); and an output component that returns the grouped results as a synchronous
result (¶ 80).

23.   As per claim 16, Arora et al. teaches a system further comprises an adapter that
accepts a synchronous request from a client and conveys the synchronous request to
the processing engine (¶ 144-146).

24.   As per claim 17, Arora et al. teaches a system, the adapter is one of a pluggable
software component and an instance of an object (¶ 295).

25.   As per claim 18, Arora et al. teaches a system, the synchronous requests is delineated across the one or more subscribed Web-based services, based on a dynamic load balancing technique that distributes portions of the synchronous request to one or more of the subscribed Web-based services, according to Web-based service load (¶ 106).

26.   As per claim 19, Arora et al. teaches a system is employed within one or more of an intranet, an internet and the Internet (¶ 93).

27.   As per claim 21, Arora et al. teaches a system, the processing engine facilitates re-distribution of portions of the synchronous request to one or more Web-based services based on load (¶ 106).

28.   As per claim 22, Arora et al. teaches a system, the message box is utilized to store information indicative of at least one of a querying client, the synchronous request and the message box (¶ 210).

29.   As per claim 23, Arora et al. teaches a system, the information is employed by the output component to facilitate returning the synchronous result (¶ 80).

30.   Claims 24-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Tripp et al. (6,516,337).

31.   As per claim 24, Tripp et al. teaches a method that facilitates Web-based asynchronous processing of synchronous requests, comprising: accepting a synchronous request; dynamically delineating the synchronous request across process engines based on process engine load (col. 9, lines 11-29); correlating asynchronous

results and errors (col. 17, lines 47-64); and returning the correlated results as a

synchronous result (col. 24, lines 27-45).

32.   As per claim 25, Tripp et al. teaches the method further comprises publishing the

synchronous request in a message queue (col. 26, lines 50-64).

33.   As per claim 26, Tripp et al. teaches the method further comprises subscribing

process engines with the message queue (col. 16, lines 9-37).

34.   As per claim 27, Tripp et al. teaches the method further comprises notifying a

requester when the request fails to be processed (col. 49, lines 20-42).

35.   As per claim 28, Tripp et al. teaches a method for asynchronously processing a

synchronous request on a Web service, comprising: transmitting a synchronous

request; distributing the synchronous request across severs within a server farm (col. 9,

lines 11-29); aggregating asynchronous results with an associated synchronous

request; and returning the aggregated results as a synchronous result (col. 24, lines 27-

45).

36.   As per claim 29, Tripp et al. teaches the further comprises utilizing request

related information to facilitate one or more of tracking the synchronous request through

processing, aggregating results, re-distributing portions of the request between servers,

and returning a synchronous result to a client (col. 34, lines 49-65).

37.   As per claim 30, Tripp et al. teaches the method further comprises distributing

the synchronous request in a dynamic manner based on server load (col. 34, line 66-

col. 35, line 13).

38.   As per claim 31, Tripp et al. teaches the method further comprises serially and/or concurrently processing the synchronous request (col. 9, lines 11-29).

39.   As per claim 32, Tripp et al. teaches a data packet transmitted between two or more computer components that facilitates Web-based asynchronous processing of synchronous requests, comprising: a component that receives a synchronous request from a client (col. 9, lines 11-29), a component that posts the request in a queue (col. 11, line 57-col. 12, line 62), a component that parses the stored synchronous request across servers within a farm of servers based on a dynamic balancing technique (col. 34, line 66-col. 35, line 13), a component that correlates asynchronous results with the synchronous request, and a component that returns the asynchronous results to the client as a synchronous result (col. 24, lines 27-45).

40.   As per claim 33, Tripp et al. teaches a computer readable medium storing computer executable components to dynamically processes a synchronous request via a Web service that utilizes load-based asynchronous processing, comprising: a component that dynamically distributes the synchronous request across processing engines based on load (col. 9, lines 11-29); a component that dynamically re-distributes the synchronous request as processing engine load changes (col. 34, lines 49-65); a component that correlates asynchronous results with the synchronous request; and a component that returns the asynchronous results as a synchronous result (col. 24, lines 27-45).

41.   As per claim 34, Tripp et al. teaches a Web-based system that employs dynamic asynchronous processing to service synchronous requests, comprising: means for

receiving a synchronous request; means for posting the synchronous request (col. 11,

line 57-col. 12, line 62); means for dynamically distributing the synchronous request

across processing engines based at least on process engine load (col. 9, lines 11-29);

means for correlating asynchronous results with the synchronous request; and means

for returning the asynchronous results as a synchronous result (col. 24, lines 27-45).

Claim Rejections - 35 USC § 103

42.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

43.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

44.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arora et

al. as applied to claim 15 above, and further in view of Tripp et al. Arora et al. teaches

the mentioned limitations of claim 15 above but fails to teach the system further

comprises an error-handling component that provides a notification when the request cannot be serviced. However, Tripp et al. teaches the system further comprises an error-handling component that provides a notification when the request cannot be serviced (see Tripp et al., col. 17, lines 47-64). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Arora et al. to a system further comprises an error-handling component that provides a notification when the request cannot be serviced in order to index catalog remotely stored data that eliminates the need to copy the remote data to a central location and for indexing the world wide web that eliminates the need for spiders to be utilized in updating the index so that an up-to-date index is provided for performing searches, and that allows conceptual information to be utilized in generating the index to make search results more meaningful (see Tripp et al., col. 4, line 66-col. 5, line 6).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are:

- Martin et al. (5,867,706) teaches method of load balancing across the processors of a server
- Braddy (6,141,759) teaches system and architecture for distributing, monitoring, and managing information requests on a computer network
- Harchol-Balter et al. (6,223,205) teaches method and apparatus for assigning tasks in a distributed server system

- Karger et al. (6,430,618) teaches method and apparatus for distributing requests among a plurality of resources

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/R. N. S./

Examiner, Art Unit 2141

7/01/2008

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2144